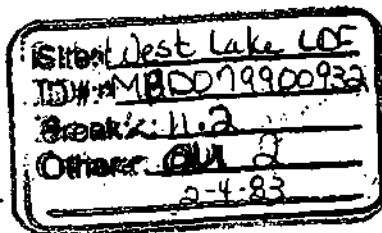


MISSOURI DEPARTMENT OF NATURAL RESOURCES
8460 Watson Road St. Louis, Missouri 63119 (314) 849-1313

3.600 St. Louis County
West Lake Sanitary Landfill
Complaint #SW 2-83



February 4, 1983

FEB 6 1983

Mr. William J. McCullough, President
West Lake Landfill, Inc.
13570 St. Charles Rock Road
Bridgeton, Missouri 63044

Dear Mr. McCullough:

Inspections were made of the condition and operation of the West Lake, Inc. sanitary landfill, St. Louis County, Missouri on December 21, 1982 and January 19, 1983. The recommendations contained in this report are based on the findings made at the time of the investigation. I trust that you will direct your attention to these findings and that you will proceed to carry out the recommendations presented.

FINDINGS:

1. Leachate collection and treatment problems were encountered and addressed.
2. Daily landfilling operations were satisfactory.
3. Public safety measures need improvement at the decomposition gas burner assembly.

DISCUSSION:

Major mechanical problems have occurred in the leachate pumping system since the time of the previous inspection on August 27, 1982. The operator advised that the pumps originally set in the two main collection wells malfunctioned repeatedly during October through December due to problems with well level sensor probes. Reportedly the pump motors were damaged on several occasions as a consequence, forcing the operator to remove the pump units for repairs. These problems resulted in much down time for the leachate removal/treatment system.

The mechanical problems were further compounded by the intense wet weather impacting the area during early December. The net result of these circumstances was an uncontrolled and excessive build-up of the leachate level within the current landfill pit. The hydrostatic head which developed eventually forced the drainage of leachate at the lowest point of the landfill toe, past the boundary of the designated fill pit. Leachate was observed seeping from the landfill and encroaching into the

40249187

Christopher S. Bond Gov
Fred A. Lufser Director
St. Louis Regional Office



SUPERFUND RECORDS

DNR 0078

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active quarry zone on both inspections. Co-mingling of leachate and impounded storm water was likewise observed on the same occasions over a portion of the quarry floor nearest the landfill toe.

The operator was directed to take all necessary steps to bring the situation back under control and minimize the potential for discharge of any contaminated water to surface streams around the property. The inspector confirmed that remedial measures were implemented in response to the crisis. These included placement of a berm to form a sump at the toe of the fill to intercept some of the leachate flow. This sump was then pumped to a 5000 gallon tank truck and hauled several times per day to the approved holding basin. The operator also elected to connect the 'clean' stormwater removal pump discharge from the quarry floor to the main line sewerage leachate to the holding basin, as a further contingency against the co-mingling problem.

Definitive progress on restoring the normal leachate collection and treatment system was documented during the inspection on January 19, 1983. As of this date, a new pump assembly was installed at the primary collection well, along with a 10,000 gallon capacity holding tank for flow equalization to the treatment plant. The operator indicated that still another pump, a turbine model, was scheduled to arrive at the site in the very near future to replace the present unit as a permanent installation. Another new pump was set in the secondary collection well, which is the well actually within the present fill pit. In accord with the approved plans, the primary well/pump is expected to intercept the majority of the leachate flow migrating from older fill sectors prior to its passage through the rock wall barrier into the current fill pit, with the secondary well pump performing in a back-up capacity. The system was functioning at the time of the January inspection.

Surveillance was also made of the other components of the leachate management system at the site. These include the temporary holding basin, mechanical lime flocculation plant, and three aerated polishing cells. All components were operating and appeared to be in good condition.

Surveillance of the decomposition gas collection/destruction system was likewise conducted. There are presently five collector headers drawing gas from the landfill sector of concern. The gas burner assembly was operating and appeared to be in good condition. However, it was also noted that the security fencing around the quarry rim at this point had still not been fully repaired from earlier work performed on the system. The operator stated that a small building is planned to house the assembly. In the meantime, repair of the fence is strongly advised in the interest of public safety.

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February 4, 1983

RECOMMENDATIONS:

1. Continue all efforts to fully restore and maintain all the components of the leachate removal and treatment system.
2. Continue good daily landfilling operations.
3. Improve security around the gas burner assembly/quarry rim area.

Should you have any questions concerning this report, contact Mike Duvall of the St. Louis Regional Office.

APPROVED:

F.D. Maddox

F.D. Maddox, P.E.
Regional Administrator
St. Louis Regional Office

PREPARED BY:

Mike Duvall

Mike Duvall
Chief, Waste Management
St. Louis Regional Office

FDM/MD/dc

enclosure

CC: Vernon Fehr, Manager
City of Bridgeton
St. Louis County Dept. of Community Health & Medical Care
Reitz & Jens
✓ Central Office, Solid Waste Management Program

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY

Annual Inspection ☐
Reinspection ☒

SANITARY LANDFILL SURVEILLANCE RECORD

Date: 1-19-83 Days/Week Open: 6

Name of Sanitary Landfill: West Lake, Inc.

Permit No: 118903, 906, 908, 909 County: St. Louis

Owner: see attached record of 12-21-82 Operator: see attached record of 12-21-82

Address: - no changes - Address: - no changes -

I. Special Conditions and Approved Modifications

A. Are there any special conditions or approved modifications of the satisfactory compliance subsections of the rules and regulations? (e.g. impermeable barrier, limited excavation, exceptions to daily cover requirements)

X Yes No

B. Is the sanitary landfill operation in compliance with the special conditions or approved modifications? (If "No," describe violations under "REMARKS.")

conditional Yes No

II. Check Types of Waste Accepted

see previous record

| | INDICATED ON PERMIT APPLICATION | REPORTED BY OPERATOR | AS OBSERVED |
|--|------------------------------------|-------------------------|-------------|
| Municipal solid waste | | | |
| Bulky waste | | | |
| Dead animals | | | |
| Incinerator residue | | | |
| Demolition and construction waste | | | |
| Brush and untreated wood waste | | | |
| Septic tank pumpings | | | |
| Wastewater treatment plant sludges | | | |
| OTHER SLUDGES (SPECIFY) | | | |
| LIQUIDS (SPECIFY) | | | |
| INDUSTRIAL PROCESS WASTES (SPECIFY) | | | |
| HAZARDOUS WASTES (SPECIFY) | | | |
| OTHER WASTES (SPECIFY) | | | |

FEB 3 1983

WASTE
MANAGEMENT PROGRAM

III. Remaining Life of Landfill

A. Estimated amount of solid waste coming through gate.
Compacted loads yds/wk tons/wk
Noncompacted loads yds/wk tons/wk

B. Estimated volume of remaining landfill covered by approved engineering plans.
 acre feet years

INSPECTION FORM
DISTRIBUTION LIST

Owner
Operator
City
County Court
Consulting Engineer
Solid Waste Program
Regional Office File
Others

IV. Satisfactory Compliance Subsections Regulations 80-3.010

Check all subsections: SAT — Satisfactory; UNS — Unsatisfactory. (If necessary describe "UNS" violations under "Remarks.")

| SECTION NUMBER | SATISFACTORY COMPLIANCE OPERATING PROCEDURE | SAT | UNS |
|--|--|-----|-----|
| (2) SOLID WASTE ACCEPTED | | | |
| (2)(C)2 | Bulky solid waste crushed on solid ground and pushed onto working face near bottom of the cell. | X | |
| (2)(C)3 | Small dead animals covered immediately with soil or solid waste. Large dead animals placed in pit and covered with four feet compacted soil. | X | |
| (2)(C)4 | Disposal of dewatered sludges on working face along with municipal solid waste. | X | |
| (2)(C)5 | Incinerator and air pollution control residues prevented from becoming airborne. | X | |
| (3) SOLID WASTE EXCLUDED | | | |
| (3)(C)1 | No unpermitted waste accepted. | X | |
| (3)(C)2 | Sign posted at entrance listing excluded wastes. | X | |
| (4) SITE SELECTION <i>needs replacement</i> | | | |
| (4)(C)1 | Site accessible in all weather conditions. Temporary roads provided for delivery to working face. | X | |
| (5) WATER QUALITY | | | |
| (5)(C)1 | Surface water courses and runoff properly diverted from the landfill. Sanitary landfill construction and grading to promote rapid surface water runoff without excessive erosion. | | X |
| (5)(C)2 | Leachate collection and treatment systems utilized where necessary to protect ground and surface water resources. | X | |
| (5)(C)3 | No ground or surface water in contact with solid waste. | | X |
| AIR QUALITY | | | |
| (6)(C) | No open burning without written permission of the proper air pollution agency and the Division. | X | |
| GAS CONTROL | | | |
| (7)(C) | Implementing decomposition gas control plan as necessary to prevent problems. | X | |
| VECTORS | | | |
| (8)(C) | Vector control programs implemented when necessary to prevent or rectify vector problems. | X | |
| AESTHETICS | | | |
| (9)(C)1 | Litter control devices utilized near working face and elsewhere as needed. Litter collected from fences, and the ground surface, and incorporated into the daily cell at the end of each day or containerized. | X | |
| (9)(C)2 | Wastes easily moved by wind covered as necessary to prevent their becoming airborne and scattered. | X | |
| (9)(C)3 | On-site vegetation and natural windbreaks being utilized to improve appearance and operation of the sanitary landfill. | | X |

| SUBSECTION NUMBER | SATISFACTORY COMPLIANCE OPERATING PROCEDURE | SAT | UNS |
|------------------------------------|---|-----|-----|
| (10) AESTHETICS (Continued) | | | |
| (10)(C)4 | Salvaged materials removed daily or stored in aesthetically acceptable containers or enclosures. | X | |
| (11) COVER MATERIAL | | | |
| (11)(C)1 | Daily cover applied regardless of weather in not less than a six inch layer. Cover material available in all weather conditions. | X | |
| (11)(C)2 | Intermediate cover applied to all areas idle for more than 60 days in a layer not less than one foot after compaction. | X | |
| (11)(C)3 | Final cover applied on each area as completed in a layer not less than two feet after compaction. | X | |
| (12) COMPACTION | | | |
| (12)(C)1 | Adequate equipment on-site, operated daily. | X | |
| (12)(C)1A | Solid waste spread in layers not to exceed two feet and confined to smallest practical area. | X | |
| (12)(C)1B | Wastes compacted to smallest practical volume. | X | |
| (12)(C)1C | Cover material compacted as much as practical. | X | |
| (12)(C)2 | Preventive maintenance performed. | X | |
| (12)(C)3 | Daily task operating manual provided. | X | |
| (13) SAFETY | | | |
| (13)(C)1 | Fire extinguishers provided on oil equipment. | X | |
| (13)(C)2 | Provisions for extinguishing fires in waste, equipment, and structures. | X | |
| (13)(C)3 | Communication equipment available. | X | |
| (13)(C)4 | Scavenging prohibited. | X | |
| (13)(C)5 | Controlled access to site by established roadways and limited to hours when operating personnel are on duty. | X | |
| (13)(C)6 | Traffic controlled and directed to designated disposing points. | X | |
| (13)(C)7 | Site dust controlled for safety purposes and to prevent nuisances. | X | |
| (14) RECORDS | | | |
| (14)(C)1A | Records of major problems and complaints. | X | |
| (14)(C)1B | Monitoring record maintained. a. leachate sampling and analyses. b. gas sampling and analyses. c. ground and surface water analyses. | X | |
| (14)(C)1C | Records of vector control efforts. | X | |
| (14)(C)1D | Records of dust and litter control efforts. | X | |
| (14)(C)1E | Records of quantity of waste handled. | X | |
| (14)(C)1F | Records of description, sources, and volume of special wastes listed in Subsection (3)(A). | X | |

V. Operation Proceeding in Accordance with Approved Engineering Plans? (If "NO," describe violations under "Remarks.")

conditional Yes _____ No _____

REMARKS - *Leachate pumping / treatment system back on-line, with further work to be done. See narrative.*

(Attach additional sheets as necessary.)

BY *Mike D-wall*
SIGNATURE OF INVESTIGATOR

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY

Annual Inspection ☐
Reinspection ☒

SANITARY LANDFILL SURVEILLANCE RECORD

Date: 12-21-82 Days/Week Open: 6

Name of Sanitary Landfill: West Lake, Inc.

Permit No's 118908, 906, 908, 909 County: St. Louis

Owner: West Lake, Inc. Operator: Vernon Fehr, manager

Address: Rte. 1, Box 206 Address: 13570 St. Chas. Rock Rd.

Bridgeton, MO 63042 < "

(314) 739 1122 < "

I. Special Conditions and Approved Modifications

A. Are there any special conditions or approved modifications of the satisfactory compliance subsections of the rules and regulations? (e.g. impermeable barrier, limited excavation, exceptions to daily cover requirements)
X Yes No

B. Is the sanitary landfill operation in compliance with the special conditions or approved modifications? (If "No," describe violations under "REMARKS.")
 Yes X No

II. Check Types of Waste Accepted

| | INDICATED ON PERMIT APPLICATION | REPORTED BY OPERATOR | AS OBSERVED |
|--|------------------------------------|-------------------------|-------------|
| Municipal solid waste | <u>X</u> | <u>X</u> | <u>X</u> |
| Bulky waste | | | |
| Dead animals | | | |
| Incinerator residue | <u>FEB. 3 1983</u> | | |
| Demolition and construction waste | <u>X</u> | <u>X</u> | <u>X</u> |
| Brush and untreated wood waste | | | |
| Septic tank pumpings | <u>WASTE</u> | | |
| Wastewater treatment plant sludges | <u>MANAGEMENT PROGRAM</u> | <u>X</u> | |
| OTHER SLUDGES (SPECIFY) | | | |
| LIQUIDS (SPECIFY) <u>Western Litho WTP residues</u> | | | |
| <u>- Monsanto / St. Peters plant WTP filter cake</u> | | <u>X</u> | |
| INDUSTRIAL PROCESS WASTES (SPECIFY) | | | |
| HAZARDOUS WASTES (SPECIFY) <u>special waste approval</u> | <u>from DNR</u> | | |
| <u>asbestos clean-up</u> | | <u>X</u> | |
| OTHER WASTES (SPECIFY) | | | |

III. Remaining Life of Landfill

A. Estimated amount of solid waste coming through gate.
Compacted loads 13,500 yds/wk tons/wk
Noncompacted loads yds/wk tons/wk

B. Estimated volume of remaining landfill covered by approved engineering plans.
 acre feet 3 years

INSPECTION FORM
DISTRIBUTION LIST

Owner X
Operator X
City Bridgeton
County St. Louis
Consulting Engineer X - Reitz & Sons
Solid Waste Program X
Regional Office File X
Others

IV. Satisfactory Compliance Subsections Regulations 80-3.010

Check all subsections: SAT — Satisfactory; UNS — Unsatisfactory. (If necessary describe "UNS" violations under "Remarks.")

| SECTION NUMBER | SATISFACTORY COMPLIANCE OPERATING PROCEDURE | SAT | UNS |
|---------------------------------|---|-----|-----|
| (2) SOLID WASTE ACCEPTED | | | |
| (2)(C)2 | Bulky solid waste crushed on solid ground and pushed onto working face near bottom of the cell. | X | |
| (2)(C)3 | Small dead animals covered immediately with soil or solid waste. Large dead animals placed in pit and covered with four feet compacted soil. | X | |
| (2)(C)4 | Disposal of dewatered sludges on working face along with municipal solid waste. | X | |
| (2)(C)5 | Incinerator and air pollution control residues prevented from becoming airborne. | X | |
| (3) SOLID WASTE EXCLUDED | | | |
| (3)(C)1 | No unpermitted waste accepted | X | |
| (3)(C)2 | Sign posted at entrance listing excluded wastes. | X | |
| (4) SITE SELECTION | | | |
| (4)(C)1 | Site accessible in all weather conditions. Temporary roads provided for delivery to working face. | X | |
| (6) WATER QUALITY | | | |
| (6)(C)1 | Surface water courses and runoff properly diverted from the landfill. Sanitary landfill construction and grading to promote rapid surface water runoff without excessive erosion. | | X |
| (6)(C)2 | Leachate collection and treatment systems utilized where necessary to protect ground and surface water resources. | | X |
| (6)(C)3 | No ground or surface water in contact with solid waste. | | X |
| (7) AIR QUALITY | | | |
| (7)(C)1 | No open burning without written permission of the proper air pollution agency and the Division. | X | |
| AS CONTROL | | | |
| (C)1 | Implementing decomposition gas control plan as necessary to prevent problems. | X | |
| VECTORS | | | |
| (C)1 | Vector control programs implemented when necessary to prevent or rectify vector problems. | X | |
| AESTHETICS | | | |
| (C)1 | Litter control devices utilized near working face and elsewhere as needed. Litter collected from fences and the ground surface, and incorporated into the daily cell at the end of each day or containerized. | X | |
| (C)2 | Wastes easily moved by wind covered as necessary to prevent their becoming airborne and scattered. | X | |
| (C)3 | On-site vegetation and natural windbreaks being utilized to improve appearance and operation of the sanitary landfill. | | X |

| SUBSECTION NUMBER | SATISFACTORY COMPLIANCE OPERATING PROCEDURE | SAT | UNS |
|------------------------------------|---|-----|-----|
| (10) AESTHETICS (Continued) | | | |
| (10)(C)4 | Salvaged materials removed daily or stored in aesthetically acceptable containers or enclosures. | X | |
| (11) COVER MATERIAL | | | |
| (11)(C)1 | Daily cover applied regardless of weather in not less than a six inch layer. Cover material available in all weather conditions. | X | |
| (11)(C)2 | Intermediate cover applied to all areas idle for more than 60 days in a layer not less than one foot after compaction. | X | |
| (11)(C)3 | Final cover applied on each area as completed in a layer not less than two feet after compaction. | X | |
| (12) COMPACTION | | | |
| (12)(C)1 | Adequate equipment on-site, operated daily. | X | |
| (12)(C)1A | Solid waste spread in layers not to exceed two feet and confined to smallest practical area. | X | |
| (12)(C)1B | Wastes compacted to smallest practical volume. | X | |
| (12)(C)1C | Cover material compacted as much as practical. | X | |
| (12)(C)2 | Preventive maintenance performed. | X | |
| (12)(C)3 | Daily task operating manual provided. | X | |
| (13) SAFETY | | | |
| (13)(C)1 | Fire extinguishers provided on all equipment. | X | |
| (13)(C)2 | Provisions for extinguishing fires in waste, equipment, and structures. | X | |
| (13)(C)3 | Communication equipment available. | X | |
| (13)(C)4 | Scavenging prohibited. | X | |
| (13)(C)5 | Controlled access to site by established roadways and limited to hours when operating personnel are on duty. | X | |
| (13)(C)6 | Traffic controlled and directed to designated disposing points. | X | |
| (13)(C)7 | Site dust controlled for safety purposes and to prevent nuisances. | X | |
| (14) RECORDS | | | |
| (14)(C)1A | Records of major problems and complaints. | X | |
| (14)(C)1B | Monitoring record maintained. a. leachate sampling and analyses. b. gas sampling and analyses. c. ground and surface water analyses. | X | X |
| (14)(C)1C | Records of vector control efforts. | X | |
| (14)(C)1D | Records of dust and litter control efforts. | X | |
| (14)(C)1E | Records of quantity of waste handled. | X | |
| (14)(C)1F | Records of description, sources, and volume of special wastes listed in Subsection (3)(A). | X | |

V. Operation Proceeding in Accordance with Approved Engineering Plans? (If "NO," describe violations under "Remarks.")

Yes X No

REMARKS - Surface drainage / positive runoff continues to need improvement around various completed landfill sectors on the West Lake property; this is a long term project. - Leachate pumping system experiencing serious problems; see attached narrative.

(Attach additional sheets as necessary.)

BY Mike Duwall
SIGNATURE OF INVESTIGATOR